

In the Figures

N.E. On Figure 5, please move the callout "Request Queue 560" so the callout touches the topmost occurrence of box "104A\_ID/1," as shown in red.

N.E. On Figure 5, please add a line between "Wait Map 570" and box "Request\_ID 572," as shown in red.

N.E. On Figure 6, please delete --5-7-- from the uppermost left corner of the figure, as shown in red.

N.E. On Figure 6, please add a line between "Wait Map 570" and box "Request\_ID 572," as shown in red.

N.E. On Figure 6, please add callout "Object Manager Server 107" to the top of the figure, as shown in red.

N.E. Please replace the former Fig. 5, as amended above, with Figs. 5A and 5B.

N.E. Please replace the former Fig. 6, as amended above, with Figs. 6A and 6B.

In the Claims

The following is a clean version of the entire set of pending claims. In accordance with 37 CFR § 1.121(c)(1)(ii), the attachment entitled "Version with Markings to Show Changes" provides marked up versions of the claims containing the newly introduced changes.

1. (As Filed) A method for communicating comprising:  
controlling a user interface presented by a web browser comprising:  
causing a web server to push an asynchronous message to the web browser;  
wherein the web browser presents a user interface change in response to the asynchronous message.
2. (As Filed) The method of claim 1 further comprising:  
generating the asynchronous message.
3. (As Filed) The method of claim 1 further comprising:

preparing to receive the asynchronous message.

4. (As Filed) The method of claim 3 wherein the preparing comprises:  
causing the web browser to provide a wait request to the web server, the wait request  
being associated with the web browser;  
identifying a source of the asynchronous message; and  
associating the wait request with the source, wherein the associating identifies the web  
browser as a recipient of the asynchronous message.

5. (As Filed) The method of claim 1 further comprising:  
causing the web browser to provide a wait request to the web server, the wait request  
being associated with the web browser;  
identifying a source of the asynchronous message; and  
associating the wait request with the source, wherein the associating identifies the web  
browser as a recipient of the asynchronous message.

6. (As Filed) The method of claim 1 further comprising:  
causing the web browser to provide a wait request to the web server, the wait request  
being associated with the web browser;  
generating the asynchronous message, the asynchronous message identifying the wait  
request, wherein the identifying identifies the web browser as a recipient of the  
asynchronous message; and  
providing the asynchronous message to the web server.

7. (As Filed) The method of claim 6 wherein causing the web browser to provide  
the wait request comprises:  
downloading requesting instructions to the web browser, wherein  
the downloading causes the web browser to execute the requesting instructions.

8. (As Filed) The method of claim 6 further comprising:  
storing a reference to a callback function with information from the wait request; and  
using the reference to call the callback function when the asynchronous message is  
provided to the web server, wherein the callback function pushes the  
asynchronous message.

9. (As Filed) The method of claim 8 further comprising:

providing the callback function with context information, the context information identifying the web browser.

10. (As Filed) The method of claim 6 further comprising:  
assigning the wait request to a connection between the web server and a business process server; and  
listening to the connection for the asynchronous message.

11. (As Filed) The method of claim 6 further comprising:  
assigning the wait request to a session between the web server and a business process server, the session being associated with a connection; and  
listening to the connection for the asynchronous message for the session.

12. (As Filed) The method of claim 1 wherein causing the web server to push the asynchronous message comprises:

calling a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message.

13. (As Filed) The method of claim 12 further comprising:  
storing a reference to the callback function; and  
using the reference for calling the callback function.

14. (As Filed) The method of claim 13 further comprising:  
storing a second reference to context information, the context information identifying the web browser; and  
using the second reference for providing the context information to the callback function.

15. (As Filed) The method of claim 1 wherein the user interface change comprises at least one of a group consisting of the following:  
causing a first user interface object to move to visually capture a user's attention;  
causing a second user interface object to issue a sound to capture the user's attention;  
presenting a screen pop of data; and

bringing a web browser window to front of screen.

16. (As Filed) A method for communicating comprising:  
causing a web server to push an asynchronous message to a web browser, wherein  
the web browser performs an action in response to the asynchronous message.

17. (As Filed) The method of claim 16 wherein  
the asynchronous message includes an action instruction to cause the web browser to  
perform the action.

18. (As Filed) The method of claim 16 wherein the performing the action  
comprises performing at least one of a group consisting of the following:  
causing a first user interface object to move to visually capture a user's attention;  
causing a second user interface object to issue a sound to capture the user's attention;  
presenting a screen pop of data; and  
bringing a web browser window to front of screen.

19. (As Filed) A method for communicating comprising:  
establishing a first connection between a web browser and a web server;  
establishing a second connection between the web server and a business process  
server;  
controlling a user interface presented by the web browser comprising:  
registering the web browser with the business process server;  
providing the web server with an asynchronous message to push to the web  
browser, the providing being performed by the business process server;  
and  
causing the web server to push the asynchronous message to the web browser;  
wherein the web browser performs a user interface change in response to the  
asynchronous message.

20. (As Filed) A method for communicating comprising:  
controlling a user interface presented by a web browser comprising:  
registering the web browser as available to receive an asynchronous message,  
wherein  
the web browser is not blocked waiting for the asynchronous message;

and

causing a web server to push the asynchronous message to the web browser;  
wherein the web browser presents a user interface change in response to the  
asynchronous message.

21. (As Filed) A method for communicating comprising:

controlling a user interface presented by a web browser comprising:

causing the web browser to provide a wait request to a web server, the wait  
request being associated with the web browser;

identifying a source of an asynchronous message;

associating the wait request with the source, wherein the associating identifies  
the web browser as a recipient of the asynchronous message; and

pushing the asynchronous message to the web browser;

wherein the browser presents a user interface change in response to the asynchronous  
message.

22. (As Filed) A method for communicating comprising:

controlling a user interface presented by a web browser comprising:

causing the web browser to provide a wait request to a web server, wherein  
the wait request is associated with the web browser and a target from  
which an asynchronous message originates;

generating the asynchronous message, the asynchronous message identifying  
the web browser as a recipient of the asynchronous message, the  
generating being performed by the target;

providing the asynchronous message to the web server; and

causing the web server to push the asynchronous message to the web browser;

wherein the web browser presents a user interface change in response to the  
asynchronous message.

23. (As Filed) A computer program product comprising:

controlling instructions to control a user interface presented by a web browser  
comprising:

pushing instructions to cause a web server to push an asynchronous message to  
the web browser, wherein

the web browser presents a user interface change in response to the asynchronous message;

and

a computer-readable medium for storing the controlling instructions and the pushing instructions.

24. (As Filed) The computer program product of claim 23 further comprising: providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser; identifying instructions to identify a source of the asynchronous message; and associating instructions to associate the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message;

wherein the computer-readable medium further stores the providing instructions, the identifying instructions, and the associating instructions.

25. (As Filed) The computer program product of claim 23 further comprising: request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser; generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and message providing instructions to provide the asynchronous message to the web server;

wherein the computer-readable medium further stores the request providing instructions, the generating instructions, and the message providing instructions.

26. (As Filed) The computer program product of claim 25 further comprising: storing instructions to store a reference to a callback function with information from the wait request; and using instructions to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message;

wherein the computer-readable medium further stores the storing instructions and the using instructions.

27. (As Filed) The computer program product of claim 26 further comprising: context providing instructions to provide the callback function with context information, the context information identifying the web browser; wherein the computer-readable medium further stores the context providing instructions.

28. (As Filed) The computer program product of claim 25 further comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the asynchronous message; wherein the computer-readable medium further stores the assigning instructions and the listening instructions.

29. (As Filed) The computer program product of claim 23 wherein the pushing instructions comprise:  
calling instructions to call a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message;  
and  
the computer-readable medium further stores the calling instructions.

30. (As Filed) The computer program product of claim 29 further comprising: reference storing instructions to store a reference to the callback function; and reference using instructions to use the reference for calling the callback function; wherein the computer-readable medium further stores the reference storing instructions and the reference using instructions.

31. (As Filed) The computer program product of claim 30 further comprising: context storing instructions to store a second reference to context information, the context information identifying the web browser; and context using instructions to use the second reference for providing the context information to the callback function;

wherein the computer-readable medium further stores the context storing instructions and the context using instructions.

32. (As Filed) The computer program product of claim 23 further comprising:  
user interface changing instructions configured to perform at least one of a group consisting of the following:  
cause a first user interface object to move to visually capture a user's attention;  
cause a second user interface object to issue a sound to capture the user's attention;  
present a screen pop of data; and  
bring a web browser window to front of screen;

wherein the computer-readable medium further stores the user interface changing instructions.

33. (As Filed) A computer program product comprising:  
controlling instructions to control a user interface presented by a web browser comprising:  
registering instructions to register the web browser as available to receive an asynchronous message, wherein  
the web browser is not blocked waiting for the asynchronous message;  
and  
pushing instructions to cause a web server to push the asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message;

and

a computer-readable medium for storing the controlling instructions, the registering instructions, and the pushing instructions.

34. (As Filed) A computer system comprising:  
a processor;  
a memory, the memory storing instructions for executing on the processor, the instructions comprising:  
controlling instructions to control a user interface presented by a web browser comprising:



pushing instructions to cause a web server to push an asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

35. (As Filed) The computer system of claim 34 wherein the instructions further comprise:

providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser;  
identifying instructions to identify a source of the asynchronous message; and  
associating instructions to associate the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message.

36. (As Filed) The computer system of claim 34 wherein the instructions further comprise:

request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser;  
generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and  
message providing instructions to provide the asynchronous message to the web server.

37. (As Filed) The computer system of claim 36 wherein the instructions further comprise:

storing instructions to store a reference to a callback function with information from the wait request; and  
using instructions to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message.

38. (As Filed) The computer system of claim 37 wherein the instructions further comprise:

context providing instructions to provide the callback function with context

information, the context information identifying the web browser.

39. (As Filed) The computer system of claim 36 wherein the instructions further comprise:

assigning instructions to assign the wait request to a connection between the web server and a business process server; and  
listening instructions to listen to the connection for the asynchronous message.

40. (As Filed) The computer system of claim 34 wherein the pushing instructions comprise:

calling instructions to call a callback function associated with the web browser when the asynchronous message is received, wherein the callback function pushes the asynchronous message.

41. (As Filed) The computer system of claim 40 wherein the instructions further comprise:

reference storing instructions to store a reference to the callback function; and  
reference using instructions to use the reference for calling the callback function.

42. (As Filed) The computer system of claim 41 wherein the instructions further comprise:

context storing instructions to store a second reference to context information, the context information identifying the web browser; and  
context using instructions to use the second reference for providing the context information to the callback function.

43. (As Filed) The computer system of claim 34 wherein the instructions further comprise:

user interface changing instructions configured to perform at least one of a group consisting of the following:  
cause a first user interface object to move to visually capture a user's attention;  
cause a second user interface object to issue a sound to capture the user's attention;  
present a screen pop of data; and  
bring a web browser window to front of screen.

44. (As Filed) A computer system comprising:  
a processor;  
a memory, the memory storing instructions for executing on the processor, the instructions comprising:  
controlling instructions to control a user interface presented by a web browser comprising:  
registering instructions to register the web browser as available to receive an asynchronous message, wherein the web browser is not blocked waiting for the asynchronous message;  
and  
pushing instructions to cause a web server to push the asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

45. (As Filed) A system comprising:  
controlling means for controlling a user interface presented by a web browser comprising:  
pushing means for causing a web server to push an asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

46. (As Filed) The system of claim 45 further comprising:  
providing means for causing the web browser to provide a wait request to the web server, the wait request being associated with the web browser;  
identifying means for identifying a source of the asynchronous message; and  
associating means for associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message.

47. (As Filed) The system of claim 45 further comprising:  
request providing means for causing the web browser to provide a wait request to the web server, the wait request being associated with the web browser;  
generating means for generating the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web

browser as a recipient of the asynchronous message; and  
message providing means for providing the asynchronous message to the web server.

48. (As Filed) The system of claim 47 further comprising:  
storing means for storing a reference to a callback function with information from the  
wait request; and  
using means for using the reference to call the callback function when the  
asynchronous message is provided to the web server, wherein the callback  
function pushes the asynchronous message.

49. (As Filed) The system of claim 48 further comprising:  
context providing means for providing the callback function with context information,  
the context information identifying the web browser.

50. (As Filed) The system of claim 47 further comprising:  
assigning means for assigning the wait request to a connection between the web server  
and a business process server; and  
listening means for listening to the connection for the asynchronous message.

51. (As Filed) The system of claim 45 wherein the pushing means comprise:  
calling means for calling a callback function associated with the web browser when  
the asynchronous message is received, wherein the callback function pushes  
the asynchronous message.

52. (As Filed) The system of claim 51 further comprising:  
reference storing means for storing a reference to the callback function; and  
reference using means for using the reference for calling the callback function.

53. (As Filed) The system of claim 52 further comprising:  
context storing means for storing a second reference to context information, the  
context information identifying the web browser; and  
context using means for using the second reference for providing the context  
information to the callback function.

54. (As Filed) The system of claim 45 further comprising:  
user interface changing means configured to perform at least one of a group consisting

of the following:

cause a first user interface object to move to visually capture a user's attention;

cause a second user interface object to issue a sound to capture the user's attention;

present a screen pop of data; and

bring a web browser window to front of screen.

55. (As Filed) A system comprising:

controlling means for controlling a user interface presented by a web browser comprising:

registering means for registering the web browser as available to receive an asynchronous message, wherein

the web browser is not blocked waiting for the asynchronous message;

and

pushing means for causing a web server to push the asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

56. (As Filed) A signal embodied in a carrier wave comprising:

controlling instructions to control a user interface presented by a web browser comprising:

pushing instructions to cause a web server to push an asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

57. (As Filed) A signal embodied in a carrier wave comprising:

controlling instructions to control a user interface presented by a web browser comprising:

registering instructions to register the web browser as available to receive an asynchronous message, wherein

the web browser is not blocked waiting for the asynchronous message;

and

pushing instructions to cause a web server to push the asynchronous message

to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

58. (New) A system comprising:

a controlling module to control a user interface presented by a web browser comprising:

a pushing module to cause a web server to push an asynchronous message to the web browser, wherein the web browser presents a user interface change in response to the asynchronous message.

59. (New) The system of claim 58 further comprising:

a request providing module to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser; an identifying module to identify a source of the asynchronous message; and an associating module to associate the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message.

60. (New) The system of claim 58 further comprising:

a request providing module to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser; a generating module to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the asynchronous message; and a message providing module to provide the asynchronous message to the web server.

61. (New) The system of claim 60 further comprising:

a storing module to store a reference to a callback function with information from the wait request; and a using module to use the reference to call the callback function when the asynchronous message is provided to the web server, wherein the callback function pushes the asynchronous message.

62. (New) The system of claim 61 further comprising:

a context providing module to provide the callback function with context information,

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the context information identifying the web browser.

63. (New) The system of claim 60 further comprising:  
an assigning module to assign the wait request to a connection between the web server  
and a business process server; and  
a listening module to listen to the connection for the asynchronous message.

64. (New) The system of claim 58 wherein the pushing means comprise:  
a calling module to call a callback function associated with the web browser when the  
asynchronous message is received, wherein the callback function pushes the  
asynchronous message.

65. (New) The system of claim 64 further comprising:  
a reference storing module to store a reference to the callback function; and  
a reference using module to use the reference for calling the callback function.

66. (New) The system of claim 65 further comprising:  
a context storing module to store a second reference to context information, the  
context information identifying the web browser; and  
a context using module to use the second reference for providing the context  
information to the callback function.

67. (New) The system of claim 58 further comprising:  
a user interface changing module configured to perform at least one of a group  
consisting of the following:  
cause a first user interface object to move to visually capture a user's attention;  
cause a second user interface object to issue a sound to capture the user's  
attention;  
present a screen pop of data; and  
bring a web browser window to front of screen.

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